# **AMENDMENTS TO THE CLAIMS**

Docket No.: 14113-00179-US

#### 1-23. (Cancelled)

24. (Currently Amended) An oligomer or polymer comprising a first repeat unit and a second repeat unit that may be the same or that is different from the first repeat unit, the first repeat unit having formula (I):

$$\frac{\left(Ar^{1}-E-Ar^{2}-E-Ar^{3}-Ar^{1}\right)}{Ar^{3}} \qquad (I)$$

wherein

each E independently represents a nitrogen or a phosphorus atom, with the proviso that at least one E is a phosphorus atom;

each Ar<sup>1</sup>, Ar<sup>2</sup> and Ar<sup>3</sup> is the same or different and independently represents an optionally substituted aryl or heteroaryl;

each E is further optionally substituted with at least one additional substituent;

n is an integer from 0 to 3; and

wherein the second repeat unit and optionally further repeat units are selected from optionally substituted phenyl, fluorene, spirobifluorene, indenofluorene, heteroaryl, dihydrophenanthrene and / or triarylamine and

with the further proviso that when E is an unsubstituted atom, then the second repeat unit is directly conjugated to the first repeat unit.

- 25. (Previously Presented) An oligomer or polymer according to claim 24 wherein each Ar<sup>1</sup>, Ar<sup>2</sup> and Ar<sup>3</sup> is an optionally substituted phenyl.
- 26. (Previously Presented) An oligomer or polymer according to claim 24, wherein at least one Ar<sup>3</sup> is substituted by a substituent selected from the group consisting of optionally

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substituted, branched, cyclic or linear  $C_{1-20}$  alkyl or  $C_{1-20}$  alkoxy;  $C_{1-20}$  fluoroalkyl, fluorine, optionally substituted diarylamine and optionally substituted diarylphosphine.

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27. (Previously Presented) An oligomer or polymer according to claim 24, wherein E is selected from the group consisting of nitrogen, unsubstituted phosphorus and phosphorus oxide.

## 28.-30 (Cancelled)

31. (Withdrawn) (Currently Amended) A method of forming an oligomer or polymer <u>as</u>

<u>claimed in claim 24, comprising a first repeat unit and a second repeat unit that may be</u>

the same or different from the first repeat unit, the first repeat unit having formula (I):

#### wherein

each E independently represents a nitrogen or a phosphorus\_atom, with the proviso that at least one E is a phosphorus atom;

each Ar<sup>1</sup>, Ar<sup>2</sup> and Ar<sup>3</sup> is the same or different and independently represents an optionally substituted aryl or heteroaryl;

each E is further optionally substituted with at least one additional substituent;

n is an integer from 0 to 3; and

with the further proviso that when E is an unsubstituted atom, then the second repeat unit is directly conjugated to the first repeat unit;

said method comprising:

the step of oligomerising or polymerising a monomer of formula (II) in the presence of a metal catalyst of variable oxidation state:

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$$LG-Ar^{1}-E-Ar^{2}-E-Ar^{1}-LG$$

$$Ar^{3}Ar^{3}$$

$$n$$
(II),

wherein each LG is the same or different and represents a leaving group capable of participating in a polycondensation mediated by a metal of variable oxidation state.

- 32. (Withdrawn) A method according to claim 31, wherein each LG is the same or different and is independently selected from halogen; a reactive boronic group selected from a boronic acid group, a boronic ester group and a borane group; or a moiety of formula -O-SO<sub>2</sub>-Z, wherein Z is selected from the group consisting of optionally substituted alkyl and aryl.
- 33. (Withdrawn) A method according to claim 32, wherein each LG is independently a halogen or a moiety of formula -O-SO<sub>2</sub>-Z, and the monomer of formula (II) is oligomerised or polymerised in the presence of a nickel complex catalyst.
- 34. (Withdrawn) A method according to claim 32, wherein the monomer of formula (II) is oligomerised or polymerised with a second aromatic monomer in the presence of a palladium complex catalyst and a base; and further wherein

each LG is the same or different and comprises a reactive boronic group and the second monomer comprises two reactive groups independently selected from halogen and a moiety of formula -O-SO<sub>2</sub>-Z, or

each LG independently comprises a halogen or a moiety of formula -O-SO<sub>2</sub>-Z and the second monomer comprises two reactive boron groups which are the same or different.

35. (Withdrawn) A method according to claim 32, wherein one LG is a reactive boron group; the other LG is a halogen or a moiety of formula -O-SO<sub>2</sub>-Z; and the monomer of formula (II) is oligomerised or polymerised in the presence of a palladium complex catalyst and a base.

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## 36.- 40 (Cancelled)

- 41. (Previously Presented) An optical device comprising an oligomer or polymer according to claim 24.
- 42. (Previously Presented) An optical device according to claim 41, wherein the oligomer or polymer is located in a layer between a first electrode for injection of holes and a second electrode for injection of electrons.
- 43. (Previously Presented) An optical device according to claim 42, wherein the device is an electroluminescent device.
- 44. (Previously Presented) A switching device comprising an oligomer or polymer according to claim 24.
- 45. (Withdrawn) A field effect transistor, comprising:
  an insulator having a first side and a second side;
  a gate electrode located on the first side of the insulator;
  an oligomer or polymer according to claim 24, located on the second side of the insulator;
  and
  - a drain electrode and a source electrode located on the oligomer or polymer.
- 46. (Withdrawn) An integrated circuit comprising a field effect transistor according to claim 45.
- 47. (Cancelled)

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48. (New) The oligomer or polymer according to claim 24, wherein the second repeat unit and optionally further repeat units are selected from optionally substituted phenyl, fluorene, spirobifluorene, indenofluorene, heteroaryl, or dihydrophenanthrene.

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- 49. (New) The oligomer or polymer according to claim 24, wherein the first repeat unit is the range from 1 to 50 mol%.
- 50. (New) A polymer according to claim 24.

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